Sands (H. B.)

A CLINICAL LECTURE

ON

INFLAMMATORY

AND ON

SPASMODIC STRICTURE

OF THE

URETHRA,

BY

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A CLINICAL LECTURE ON INFLAMMATORY AND ON SPASMODIC STRICTURE OF THE URETHRA.

BY
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GENTLEMEN :—Some of you have seen a typical case of inflammatory stricture, which lately came under my care, on account of retention of urine. I will read the following brief account of the case, which has been condensed from the hospital records, and afterward endeavor to draw from it some useful lessons for your instruction.

E. C., æt. 25, a widower, was admitted into the Roosevelt Hospital on Dec. 2d, 1878. Had gonorrhœa three years ago; recovered readily, no gleet or symptoms of stricture following. Three weeks before admission was again attacked with gonorrhœa, and during past week had much purulent discharge, accompanied with difficult and painful micturition, the stream of urine being small and twisted. Complete retention occurred a few hours before admission, and unsuccessful attempts had been made to pass a catheter.

On admission, the usual symptoms of acute retention were present, the distended bladder reaching as high as the umbilicus. Patient suffered great pain, and strained violently, without being able to pass any urine. On examination of the urethra, a close obstruction was found, about six inches behind the meatus, the mucous membrane at the seat of obstruction being extremely sensitive, and prone to bleed. After a patient trial, a filiform bougie was passed into the bladder; but although the instrument did not appear to be tightly grasped, no larger one could be introduced, and no urine escaped on its withdrawal. The bladder was then aspirated above the pubes; but, owing to a defect in the instrument, only nineteen ounces of urine could be withdrawn. The removal of this quantity, however, afforded great relief, and under the use of hot baths and small doses of opium, some urine was passed on the following morning. Twenty-four hours after the bladder had been aspirated, it was readily emptied by a flexible catheter, No. 17 F. On Dec. 4th, micturition became quite free, and on Dec. 5th, patient was discharged at his own request, a steel sound, No. 27 F. having been passed without difficulty into the bladder.

The case thus briefly narrated affords a good example of that variety of stricture which has been called inflammatory, or congestive; and I think that these terms have been well chosen. Some authors have proposed to discard the name "inflammatory stricture," believing that the symptoms ascribed to this affection are due to spasm of the muscular fibres surrounding the urethra, and that, therefore, the term "spasmodic" ought to be substituted for "inflammatory." I consider this suggestion unfortunate; and if either appellation had to be dropped, I would much rather retain the latter one. But I think it necessary to recognize the existence of each one of these forms of

stricture, although I believe that the spasmodic variety is rare. Often both forms are associated ; but this association is not invariable, and it will therefore be proper to study separately the two morbid conditions denoted by the names in question.

To render intelligible what I am about to say, it will be necessary to recall to your minds a few facts relating to the anatomy of the urethra. Externally to the mucous membrane are found one or more layers of unstriped muscle, disposed either circularly or longitudinally, and varying considerably in thickness and general arrangement in the different segments of the canal. In the prostatic division, there exist both longitudinal and circular fibres, the latter forming a stout muscular ring, called by Henle the sphincter vesicæ internus. Close to the bladder, this layer of fibres is nearly half an inch thick, the thickness gradually diminishing towards the apex of the prostate. Throughout most of the gland, also, the muscular predominates over the glandular tissue, so that the prostatic urethra may be regarded as a canal running through a thick mass of unstriped muscle. Outside of, and blended with the sphincter vesicæ internus, are numerous fibres of striated muscle, forming the sphincter vesicæ externus, which is most highly developed toward the apex of the prostate, where it forms a complete ring, and is continuous with the compressor urethræ.

The membranous division of the urethra is surrounded by a stratum of plain muscle, about one millimetre in thickness, the fibres being, for the most part, circular. Externally to this layer is found a considerable quantity of striated muscle, constituting the compressor urethræ, and capable of forcible contraction during the emission of semen, or the expulsion of the last drops of urine at the end of micturition.

Around the spongy portion of the urethra there are no voluntary fibres ; while the plain fibres, which are placed longitudinally, are quite scattered, forming a broken layer, which, where it exists, does not exceed half a millimetre in thickness. Circular fibres are wanting, except in the posterior part of the bulb.

The only anatomical facts that remain to be mentioned, are the narrowness of the membranous urethra, and the inability of both the membranous and the prostatic portions to undergo sudden dilatation, owing to the firmness of the textures by which they are enveloped. These circumstances will be found to explain the relative frequency with which the deeper parts of the urethra are obstructed in cases of inflammation of its lining membrane.

The causes of inflammatory or congestive stricture are various. Wounds, accidental or surgical, of the urethra or its surrounding parts ; excessive alcoholic stimulation ; a highly acid state of the urine ; inflammation of the pelvic organs, especially the prostate ; and the internal use of turpentine or cantharides, are more or less common causes of this affection. But, most often, the disease comes on during the course of either gonorrhœa or gleet, particularly when the symptoms have been severe, and the discharge profuse. After venereal excesses, or exposure to cold, or indulgence in alcoholic stimulants, the patient finds that micturition is either difficult or im-

possible. As the bladder continues to distend, the pain and straining increase, but the inability to void the urine persists ; and the case is brought to the notice of the surgeon, who, on examination of the urethra, discovers an obstruction, which varies in degree in different instances, and is usually situated at the bulbo-membranous junction. Occasionally it is seated in the prostatic part of the canal, when, however, it is apt to depend on acute prostatitis, or prostatic abscess, affections which I do not now propose to describe. Nearly always the urethral mucous membrane at the seat of stricture is highly sensitive, and bleeds at the slightest contact of an instrument. Nevertheless, in many cases, a catheter of medium size can be safely introduced into the bladder, the obstruction giving way to gentle, but steady, pressure. Sometimes, nothing larger than a filiform bougie can be inserted ; but, after allowing this to remain for a few minutes, the urine will often flow in a narrow stream when it is withdrawn. Ether occasionally facilitates the passage of an instrument ; but often, in severe cases, anæsthetics are of no avail, and the obstruction is, for a time, impassable. Relief, however, soon follows appropriate management ; and after the lapse of perhaps twenty-four hours, the urine begins to flow, at first in a small, afterwards in a larger stream ; and the symptoms of retention disappear. After recovery has taken place, the urethra will often be found to have its normal dimensions ; while, in other cases, an organic stricture will be detected at the site of the previous obstruction, causing a permanent narrowing of the canal to a greater or less degree.

In such a condition as I have described, the only rational explanation of the facts is that which ascribes the symptoms mainly, or entirely, to a temporary swelling of the mucous membrane of the urethra and of the subjacent tissues at the seat of obstruction. I am aware that this explanation is rejected by some, who deny that any amount of inflammatory swelling can cause retention, and who attribute the symptoms to a constriction of the urethra, caused by a spasmodic action of the muscular fibres that surround it. But this latter view seems to me to over-estimate the effect of muscular action in causing the constriction, as well as to ignore the agency of other causes which, under the circumstances, may be adequate to produce it. We know that, in various parts of the body, natural passages may be narrowed, or even occluded, by the swelling that accompanies an inflammation of their lining mucous membrane. Doubtless, most of us have suffered, at one time or other, from stoppage of the nostril, dependent upon the tumefaction of the Schneiderian membrane, which attends a common cold. Less familiar, yet not unusual examples of obstruction, due to a similar cause, are found in cases of inflammation affecting the lining membrane of the external auditory meatus, the tear passages, or the Eustachian tube. Accordingly, analogy would lead us to expect that in urethritis, the dilatability of the canal would be diminished in consequence of inflammatory swelling. That such swelling is often present, is demonstrated by the tumefaction which, in gonorrhœa, is frequently observed in the mucous membrane near the external meatus ; and we know that, usually, the

inflammation extends for a considerable distance behind this orifice, being often most marked and obstinate in the neighborhood of the bulb. We might, therefore, reasonably anticipate that the stream of urine would be narrow in gonorrhœa; and that it is so, has long been known to all who have carefully noted the phenomena of the disease. Examine the first patient you find afflicted with an attack of acute urethritis, and you will discover his micturition to be not merely painful, but difficult, in consequence, as I think we may fairly imagine, of just such swelling of the inflamed parts as occasions obstruction in the several instances I have already adduced by way of illustration. This diminution in the size of the urinary stream often occurs at an early period, when the disease is limited to the anterior part of the urethra. In this case, it would be hardly fair to ascribe the symptoms to spasm, as the muscular fibres in this situation are insignificant in number, and cannot be thought capable of energetic contraction. We should bear in mind, too, that the probable effect of urethral inflammation would be rather to diminish than to increase the power of the organic muscular fibres surrounding the canal. In iritis, for example, the pupil is always sluggish, and responds slowly to the stimulus of light or atropine, even before the formation takes place of adhesions between the iris and the lenticular capsule. Likewise, in peritonitis, the muscular coat of the intestine, instead of being in a state of spasm, is commonly paralyzed, thus permitting unnatural distension of the gut, and preventing the action of cathartics.

Admitting, then, that obstruction of the urethra may be caused by inflammatory swelling, we can readily conceive that such obstruction might attain its maximum in the membranous division of the canal, which is normally narrow, and invested by textures that are comparatively firm and unyielding; and, so far as my experience goes, the bulbo-membranous junction is the point at which the catheter is usually arrested, in cases of inflammatory stricture. The extreme sensitiveness of this part in such cases, and the readiness with which it bleeds, are further evidences of the inflammatory nature of the disease. Nevertheless, I am not prepared to deny that, in inflammatory stricture, the obstruction may be partly due to spasmodic contraction of the striated muscle known as the compressor urethræ, for I suspect that such contraction has a certain share in the production of the symptoms, and that it may even determine retention in some cases, in which the tumefaction of the inflamed tissues would alone be inadequate to cause it. I merely desire to express my opinion that muscular spasm is not the chief factor in the pathology of the affection, and that its influence has been greatly over-rated.

To make this point clearer to you, it will be desirable to inquire carefully into the nature of purely spasmodic stricture; that is to say, of stricture dependent solely on muscular contraction, and not associated with any inflammatory or congestive thickening of the parts at the seat of obstruction. By proceeding in this manner, we shall be able, perhaps, to estimate more correctly the share which ought to be assigned to spasm, in the production of the symptoms belonging to inflammatory stricture.

Now, purely spasmodic urethral stricture, although often described, is, in my judgment, very seldom met with. The most extravagant statements are made by some writers respecting the frequency of its occurrence ; and it is gravely held that the muscular tissue external to the spongy portion of the urethra is capable of powerful contraction upon the canal at any point. Such language seems to me to be entirely visionary, and to be based upon abstract notions concerning the muscularity of the urethra, which have been gained by the hasty perusal of books on microscopic anatomy, and not from actual dissection. As I have already remarked, except in the posterior part of the bulb, the muscular tissue outside of the mucous membrane of the spongy urethra forms a broken layer, nowhere exceeding one-fiftieth of an inch in thickness, and composed only of longitudinal fibres. A considerable quantity of unstriped muscle exists in the erectile tissue of the corpus spongiosum ; but this cannot affect the dilatability of the urethra, while the insignificant layer of longitudinal fibres just referred to, can hardly be thought capable of forcible contraction. That they can cause anything like stricture, I do not believe ; nor have I ever met with any morbid condition resembling spasm in the spongy portion of the urethra.

The doctrine of spasmodic urethral stricture originated with the celebrated John Hunter, whose genius enabled him to infer the muscularity of the urethra, although he did not succeed in demonstrating it. But I think it is evident, from all that Hunter wrote regarding urethral stricture, that he did not recognize the inflammatory form of the disease ; and that his views concerning urethral spasm would, at the present day, be regarded as crude and unsatisfactory.

Anatomy and physiology alike point out the membranous division of the urethra as the one in which spasmodic stricture would be most apt to occur ; and it is easy to conceive that the contraction of the compressor urethræ muscle might be sufficiently energetic to cause retention of urine. Nevertheless, I believe such an occurrence to be extremely rare, although it is often spoken of as being the cause of symptoms, the nature of which must be considered at least as doubtful. Among these doubtful cases, I would place those in which the patient is unable to urinate in consequence of fear, or some mental emotion. Numerous examples of this sort of inability have been recorded ; and the morbid state—if it may be so called—is one with which every practitioner is familar. It has been aptly named by Sir James Paget, "stammering of the bladder," and appears, as he remarks, to depend upon a want of concord between the muscles concerned in emptying the bladder, and the sphincteric muscles which guard its orifice, namely, the two vesical sphincters and the compressor urethræ. Now, in the cases just referred to, it is the failure of these latter muscles to relax, which presents the evacuation of the bladder ; but this can hardly be called stricture, and never offers the slightest obstacle to the introduction of a catheter. Other doubtful cases are those in which retention occurs after parturition, or after operations on the rectum, such as the ligation of hemorrhoids, or the division of anal fistulæ. I can find the these cases no evidence of

spasm, and in treating them, I have never experienced the least difficulty in passing a catheter. The cause of retention in such instances cannot be stated positively, and is probably not always the same. A want of harmony between the muscles concerned in micturition, a dread of pain during the act, hysteria, and congestive swelling of the parts around the deep urethra, suggest themselves as possible causes of the trouble in question. But, whatever may be the explanation of it, the facility with which a catheter may be introduced, proves the absence of any decided urethral contraction or spasm.

I am likewise very sceptical as to the spasmodic character of the obstacle which is said to be so frequently met with in persons who have an extremely sensitive urethra, or in whom the catheter is introduced without due gentleness. In such instances, the difficulty experienced is commonly ascribed to spasm of the urethra; but it would be more reasonable, I think, to attribute it either to the voluntary resistance of the patient, or to a want of surgical dexterity. Catheterism is a delicate procedure, and oue that is quite apt to fail, if the patient shrinks from the operation, or the surgeon is rough and unskillful. It is a matter of common observation, that one surgeon will often perform it successfully, immediately after another one has failed; and even on the cadaver, I have repeatedly seen students foiled in their attempts to reach the bladder, although the urethra had its normal dimensions. If the point of the instrument, having arrived at the bulbo-membranous junction, is not directed with precision, it will, as you know, impinge on the triangular ligament, and be arrested in its course. By withdrawing it slightly, and then altering its direction, its point may be made to enter the opening in the ligament, and to pass on readily into the bladder. I am convinced that the resistance offered by this natural obstacle is the cause of what is often termed spasm of the compressor urethræ; and I am very doubtful whether this muscle can contract with sufficient force to prevent the introduction of a catheter steadily and properly directed. With the object of estimating the degree of obstruction that can be caused by its action, I have often resorted to a simple experiment. The muscle, as is well known, can be made to contract voluntarily, the contraction being simultaneous with that of the accelerator urinæ and the sphincter ani. Now I have often observed, that if, during catheterism, and when the instrument has been introduced as far as the bulb, the patient is instructed to contract the compressor urethræ with all the energy he can command, little or no resistance is offered to the onward passage of the instrument. In a few cases, the resistance can be distinctly felt; but, even then, it can be overcome by steady and gentle pressure. Likewise, when a catheter has been introduced into the bladder, its withdrawal is never rendered difficult by any muscular effort which the patient can make. So far as my personal experience goes, I have yet to meet with a single instance of purely spasmodic urethral stricture. Yet I will not affirm that such a form of stricture never exists, as a few examples of this kind have been recorded by competent observers. I only contend that the disease is an exceedingly rare one;

and that those who describe it as of common occurrence, are guilty of avoidable errors in diagnosis.

To what extent spasm of the compressor urethræ may complicate either an organic or an inflammatory stricture, situated in the deeper part of the urethra, I cannot say, although I am disposed to think that in both these affections, the complication often exists. But I am certain, that whatever part of the obstruction may be due to morbid muscular action, can always be successfully overcome by the pressure of a catheter, aided, if necessary, by the administration of an anæsthetic.

Of late years, the theory of reflex action has been applied—or I would rather say—misapplied, to a class of cases, the pathology of which is, in my judgment, too well established to be overthrown. It has been asserted dogmatically, that what is commonly regarded as deep seated organic stricture, is nothing else than a constriction of the urethra, due to spasm of the compressor urethræ, such spasm being the result of a reflected irritation from one or more true organic strictures, situated anteriorily in the spongy portion of the canal. This theory, which, I must tell you, rests upon a very slender foundation, was invented by the French surgeon Verneuil, who made it the subject of a communication to the Anatomical Society of Paris, in the year 1866.* Prior to that time, abundant testimony, derived from post-mortem examinations, had been adduced to prove, that in a large majority of cases of organic stricture, the contraction was situated in the bulbous portion of the urethra, near to the triangular ligament. I may remark. in passing, that this fact has never been refuted by anatomical evidence. In corroboration of it, I would state, that out of thirteen specimens of urethral stricture contained in the museum of the New York Hospital,twelve exhibit well marked organic contraction at, or near to, the bulbo-membranous junction.

Now, Verneuil, who appears not to have examined strictures by dissection, asserted, as the result of clinical observation, that deep seated organic strictures, so far from being common, were extremely rare; and that, in the immense majority of cases, supposed to be of this nature, the real stricture would be found in the penile portion of the urethra, the contraction of the deeper segment being due to a reflex spasmodic action of the compressor urethræ muscle. He acknowledged that his views were hypothetical,and invoked the aid of his colleagues in testing their accuracy. During the thirteen years, however, which have elapsed since his opinions were promulgated, nothing confirmatory of them has appeared in the transactions of the Anatomical Society.†

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*Bulletin de la Société Anatomique de Paris. Tome 41, p. 170.

†Two specimens, intended to sustain Verneuil's theory, were presented to the Anatomical Society in 1870, by M. Cornillon, an *interne* in one of the Paris hospitals. Both cases, however, are inconclusive, as in one, spasmodic stricture was inferred to exist merely from the arrest of a filiform bougie, while in the other, a false passage was found in the urethra at the bulbo-membranous junction, communicating with a perineal abscess.

About a year after Verneuil had published his views, Folet, one of his pupils, made them the topic of an elaborate article, which was inserted in the "*Archives Generales*," ‡ and in which he recorded the history of all the cases of stricture which had been treated in Verneuil's service at the Laraboisiére Hospital, during a period of seven months. Of these patients, ten in number, only one was thought to have deep seated organic stricture; while in nine of them, one or more strictures were detected in the spongy portion of the urethra. In all of the latter, however, a decided obstruction was encountered in the membranous urethra, which was believed to be the seat of reflex muscular contraction. Folet concludes from his observations, that deep-seated organic strictures are rare, while penile strictures are frequent; that in every case of the latter, a constriction will be discovered in the membranous urethra, opposing the entrance of a sound ; and that this constriction is the result of a reflex spasm of the compressor urethræ muscle, induced by organic stricture situated anteriorly.

Two things are evident on reading Folet's paper; first, that the writer is unduly desirous of defending a favorite theory; and secondly, that he has mistaken the natural obstacle I have referred to, as situated in front of the triangular ligament, for a contraction of the urethra occasioned by spasm. The paper affords a curious example of ingenious speculation, but fails utterly in carrying conviction to an impartial mind.

So far as I am aware, the views of Verneuil and his pupil concerning spasmodic stricture, have not been adopted in his native country; but I have thought it proper to direct your attention to them, because they were presented here as a surgical novelty by Prof. Otis in 1875.[1] and urged by him as a plea for the performance of operations which I believe to be dangerous and unwarrantable. It was held that, as a rule, what surgeons generally regarded and treated as deep seated organic stricture, was, in fact, merely a constriction of the membranous urethra caused by chronic spasm of the muscular fibres surrounding it, and that a constriction of this kind could not be distinguished from one dependent on true organic stricture. It was furthermore alleged that the free division of one or more anterior strictures, presumed, in such cases, to exist, would be immediately followed by a subsidence of the spasm, permitting the easy introduction of a full-sized instrument.

Such statements demand the closest scrutiny, and cannot be accepted without reserve. A certain degree of scepticism is necessary to guard against error, and a just conservatism requires that well established opinions should not be renounced until they have been proved untenable. The science of medicine, although rapidly advancing, can reckon up many more innovations than discoveries; and no extraordinary assertion ought to be accepted, unless it can be amply verified. The arguments that may be urged against the adoption of the theory I have referred to are numerous; but it will now

‡ Archives Generales de Medicine, 1867, p. 401.

1 On Spasmodic Urethral Stricture. By F. N. Otis, M.D. Archives of Dermatology, Vol. 1, No. 3, N. Y., 1875.

suffice to mention those of chief importance. First, the theory is unsupported by evidence derived from pathological anatomy. So far as the examination of existing specimens shows, organic stricture of the urethra occurs with greatest frequency in the deeper portions of the canal, in the neighborhood of the bulbo-membranous junction. Those who assert the contrary are bound to prove the truth of their assertion by anatomical evidence, as Verneuil, the originator of the new doctrine, himself acknowledged. No such evidence has been presented, while the clinical testimony offered is exceedingly unsatisfactory, many of the so-called anterior "strictures of large calibre" having no existence, as I believe, except in the imagination of the surgeon or the patient. Moreover, it cannot be admitted that a spasmodic contraction of the urethra is undistinguishable from a true organic stricture. The two affections are so widely different, that they can be confounded only by an incompetent observer. Spasmodic contraction, when occurring, is variable in degree, and transient in duration, and can always be overcome by the steady pressure of a catheter or a sound. Any doubt as to the true nature of the disease can be settled by the administration of an anæsthetic, which will relax the compressor urethræ, as it is known to relax the sphincter ani, a much more powerful muscle, spasm of which often accompanies the disease called anal fissure. That, under ether, any such contraction of the compressor urethræ can take place as to prevent the introduction of a catheter, is so totally at variance with the well known influence of anæsthetics in causing the relaxation of other sphincter muscles, as to seem almost absurd; nor do I think that the fact has ever been established on trustworthy authority.

As a matter of observation, I have examined many cases of well marked penile stricture without being able to discover the slightest accompanying obstruction in the membranous urethra; so that I feel justified in assuring you that the association of the two morbid conditions is certainly not, as it has been alleged, either frequent or invariable.

Regarding the theory as unsound, I cannot think that the practice deduced from it is otherwise than pernicious. It neglects the principle disease for one of secondary importance. The readiness to diagnosticate stricture in doubtful cases, and to mutilate the penis and urethra by extensive and unnecessary cutting, is, in my humble judgment, not very creditable to the American Surgery of the present day; and I venture to predict that there will soon be a wholesome reaction in favor of more cautious methods of diagnosis, and of milder and safer modes of treatment. The reported cases of marvellous cures of so called permanent spasmodic stricture, said to have been effected by the incision of organic contractions situated anteriorly, have not impressed me with their validity; and, although I would not deny the possibility of such results, I cannot refrain from expressing my incredulity. I was much interested lately in an operation which was performed by one of my colleagues at the New York Hospital, upon a man who has been admitted on account of a deep-seated stricture, situated five inches behind the meatus, and admitting only a filiform bougie.

Anteriorly, several strictures of large calibre were diagnosticated, and it was decided to divide these in the hope that the deeper obstruction would then yield. But, after the meatus had been freely cut, and the urethra had been so extensively divided with the dilating urethrotome, that a bulbous sound, No 33 F. could be passed without resistance from the meatus to the bulb, the deep stricture remained as tight as ever. With considerable difficulty, Maisonneuve's urethrotome was then introduced, and the stricture divided in the usual manner. The result was such as I had anticipated; and, although I was greatly interested in the operation as a scientific experiment, I have no hesitation in saying that it would have been far better if the injury inflicted on the anterior part of the urethra had been avoided. Certainly, the result of the experiment affords no encouragement for a repetition of such heroic procedures, which are at least useless, and by no means free from risk.

The treatment of inflammatory stricture has been alluded to, but perhaps needs a fuller explanation. Retention of urine is the most urgent symptom present, to relieve which you should endeavor to empty the bladder by means of a catheter. The instrument, whether flexible or not, must be employed with great gentleness, otherwise the inflamed parts may be lacerated, and the existing mischief aggravated. Anæsthetics sometimes, but rarely, according to my experience, afford much help; and of late years I have almost ceased to use them. Rest in bed, leeches applied to the perinæum, the hot bath, and opium, are valuable adjuvants in the treatment, and may be trusted to alone, if the bladder is not much distended. But, if the symptoms of retention are pressing, and a catheter cannot be safely introduced, the bladder should be immediately emptied by means of an aspirator, the needle of which must be inserted above the pubes. Instant relief follows this simple operation, which I regard as one of the most precious resources of modern surgery. Puncture of the bladder with the old fashioned trocar was always considered a somewhat barbarous procedure; and therefore, perhaps, never met with the favor it deserved as a surgical expedient. But the aspirator is efficient, safe, and almost painless in its operation; and may be repeatedly employed, if necessary, without the fear of evil consequences. Usually, after the bladder has been punctured once or twice, the urine begins to escape from the urethra. The stream is small at first, but soon grows larger, and in the absence of organic stricture often attains its normal size within forty-eight hours from the time of the attack. Of course, after the urgent symptoms have subsided, any remaining inflammation or organic stricture of the urethra should receive proper attention, in order to guard against a recurrence of the disease.

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